Fire Program Analysis Prototype Results

July 23, 2007

(EOG Recommendations to WFLC)

Issue: The FPA Development Team and Interagency Science Team (IST) have completed the analytical prototype for Alternative 3 – representing preparedness/initial attack, large fire suppression, fuels treatments, and trade-offs.

Background: The Wildland Fire Leadership Council (WFLC) in December 2006 endorsed development of a prototype to be delivered June 30, 2007. Since December, the FPA Development Team has worked with the IST and other partners to construct a series of interacting models that collectively address landscape-level fuel treatments, preparedness for fire and initial response (initial attack), and the consequences and costs. Additionally, WFLC requested a prototype of the large fire simulation model that could be used to validate the large fire surrogate indices that were envisioned.

These models comprise an analytical system that will help Fire Planning Units (FPUs) and the agencies' national budget planners analyze investment options for preparedness and fuels when proposing budgets to OMB and Congress beginning with the FY 2011 budget. Options for fire prevention programs will be incorporated into the analysis by June 2008. Prototype success criteria were approved by Executive Oversight Group co-chairs in January 2007. These criteria include the ability to calculate performance measures, demonstrate internal compatibility across subcomponents, meet subject matter expert expectations, ensure that workload demands are reasonable, and that cost and schedule for final delivery can be assessed.

Prototype Development Highlights and Key Considerations:

- Initial response module runs are consistent with FPU expectations for all seven prototype FPUs.
- Data from two of the prototype FPUs have run through the analytical models.
- The large fire surrogate is based on a statistical summary of the existing Fire Spread Probability (FSPro) model.
- The design of the goal programming module has begun. Initial results are being evaluated for use by national decision makers.
- The prototype large fire simulation model envisioned to validate the large fire surrogate indices was successfully developed and tested.
- The design has been enhanced to ensure it incorporates nonfederal partners and their resources in the analyses.
- The IST suggests the prototype is broadly consistent with the recommended system architecture, and recommends continued development of the FPA system and strengthened interactions with the science team.
- The membership of Management Advisory Team (MAT) is being identified, and the business leads who will co-chair the MAT have begun their FPA roles in Boise.

Success Criteria – Scope, Schedule, and Cost

One of the primary reasons for conducting a prototype was to identify any risks that might affect the development of an operational FPA system. The FPA Executive Oversight Group approved five criteria by which to measure the success of the prototype:

1. Demonstrate the capability to calculate the modeled performance measures based on input information available from data and models.
2. Demonstrate that individual modules are consistent internally and compatible with other modules.
3. Meet the subject matter experts' expectations in terms of model results.
4. Assess the workload demands on the field and that the computational needs are reasonable.
5. Accurately assess the expected cost and schedule for implementing the scope of FPA as recommended by the Interagency Science Team.

Based on these criteria, please find listed below the highlights of an analysis of risk that remains:

Scope:

- Little to no risk is perceived in meeting the scope or staying within scope of the project.

Schedule:

- Some risks are related to data availability of current information in LANDFIRE data, tight timelines for system integration of subcomponents, expectations for broader uses of the FPA system, potential expectations to expanded stakeholder involvement, and continued involvement of the science team – these risks can be mitigated to a substantial degree.

Cost:

- Cost risks are mostly related to scheduling and data availability – these can be mitigated to a substantial degree. The prototype was completed under its $4.9M budget and the development and deployment phases are expected to likewise be delivered within the $9.0M budget.

Recommendation:

It is recommended that the development and implementation of the FPA system should proceed with a June 2008 delivery.

Contact: Nina Rose Hatfield at 202-208-1829 or Kent Connaughton at 202-205-1657